

Date: Mon, 09 Aug 2004 13:28:42 -0500 (CDT)
From: "Evgueni A. Iakouchev" <yakushev@bama.ua.edu>
Subject: Re: outer dimension of calibration sources
To: Karsten M Heeger <KMHeeger@lbl.gov>
Cc: Evgueni Yakushev <yakushev@bamahep1.hep.ua.edu>,
Jerome Busenitz <busenitz@bama.ua.edu>,
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Hi Karsten,
Information I have:

1) Composite source:
encapsulate in cylinder with D=12 mm and H=17 mm attached to a rod.
Distance from the pin hole on the connection nut to end of the source
134.0(5) mm. Source offset (distance from center of the source activity to
the pin hole 13.0 cm)
You can find some more information at
http://bama.ua.edu/~busenitz/kamland/certification_composite.pdf

2) AmBe
AmBe source is just a stainless steel cylinder with dimensions:
D=34.9(1) mm H=24.6(1) mm
A cage used to connect it to the deployment system.
Last time we used the cage shown at:
<http://general.krl.caltech.edu:8081/KamLAND-source/372>
Source weight is 108 g, so I am not convinced that the cage can be used
for source holding in horizontal position. (please contact Bob about)

Anyway, distance from the pin hole to upper edge of the bottom circle is
20.0 cm, source activity offset is 19.0(3) cm.

3) Old Co60 source (if you want to use it)
source capsule is a cylinder with 6 mm in diameter.
It attached to a rod.
Source activity offset is 21.0 cm.
Full length of the source from the pin hole is about 22 cm.
Source is bent, so actual projections are slightly different.

Tim and Evgueni

On Sun, 8 Aug 2004, Karsten M Heeger wrote:

>
> Evgueni, Tim, Jerry, Herb,
>
> We are designing a 2-wire source protection cage that will offer
> additional protection for the sources and the detector during the
> deployment of the 4pi system.
>
> Do you have the geometry and outer dimension of all sources that have
> been deployed with the z-axis system? This would be very helpful.
>
> Thanks,
> Karsten
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